

SEQUENCE LISTING

<110> Donoho, Gregory
 Scoville, John
 Turner, C. Alexander Jr.
 Friedrich, Glenn
 Abuin, Alejandro
 Zambrowicz, Brian
 Sands, Arthur T.

<120> Novel Human Proteases and
 Polynucleotides Encoding the Same

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<150> US 60/181,924

<151> 2000-02-11

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<212> DNA

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Pro Ser Pro Phe Thr His Pro His Leu Leu Arg Pro Gly Glu Val Thr
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Pro Gly Leu Ser Gln Val Glu Tyr Ala Leu Arg Arg His Lys Leu Met
65           70           75           80
Ser Leu Ile Gln Lys Glu Ala Gln Gly Gln Ser Gly Thr Asp Gln Thr
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Val Val Val Leu Ser Asn Pro Thr Tyr Met Ser Asn Asp Ile Pro
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Tyr Thr Phe His Gln Asp Asn Asn Phe Leu Tyr Leu Cys Gly Phe Gln
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Glu Pro Asp Ser Ile Leu Val Leu Gln Ser Leu Pro Gly Lys Gln Leu
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Pro Ser His Lys Ala Ile Leu Phe Val Pro Arg Arg Asp Pro Ser Arg
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Glu Leu Trp Asp Gly Pro Arg Ser Gly Thr Asp Gly Ala Ile Ala Leu
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Thr Gly Val Asp Glu Ala Tyr Thr Leu Glu Glu Phe Gln His Leu Leu
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Pro Lys Met Lys Ala Glu Thr Asn Met Val Trp Tyr Asp Trp Met Arg
      195           200           205
Pro Ser His Ala Gln Leu His Ser Asp Tyr Met Gln Pro Leu Thr Glu
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Ala Lys Ala Lys Ser Lys Asn Lys Val Arg Gly Val Gln Gln Leu Ile
225           230           235           240
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      260           265           270
Ser Lys Ala Pro Val Glu Glu Ala Phe Leu Tyr Ala Lys Phe Glu Phe
      275           280           285
Glu Cys Arg Ala Arg Gly Ala Asp Ile Leu Ala Tyr Pro Pro Val Val
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Ala Gly Gly Asn Arg Ser Asn Thr Leu His Tyr Val Lys Asn Asn Gln
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Leu Ile Lys Asp Gly Glu Met Val Leu Leu Asp Gly Gly Cys Glu Ser
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Ser Cys Tyr Val Ser Asp Ile Thr Arg Thr Trp Pro Val Asn Gly Arg
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Phe Thr Ala Pro Gln Ala Glu Leu Tyr Glu Ala Val Leu Glu Ile Gln
      355           360           365
Arg Asp Cys Leu Ala Leu Cys Phe Pro Gly Thr Ser Leu Glu Asn Ile
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Tyr Ser Met Met Leu Thr Leu Ile Gly Gln Lys Leu Lys Asp Leu Gly
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<213> homo sapiens

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 35 40 45
 Pro Ser Pro Phe Thr His Pro His Leu Leu Arg Pro Gly Glu Val Thr
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 Pro Gly Leu Ser Gln Val Glu Tyr Ala Leu Arg Arg His Lys Leu Met
 65 70 75 80
 Ser Leu Ile Gln Lys Glu Ala Gln Gly Gln Ser Gly Thr Asp Gln Thr
 85 90 95
 Val Val Val Leu Ser Asn Pro Thr Tyr Tyr Met Ser Asn Asp Ile Pro
 100 105 110
 Tyr Thr Phe His Gln Asp Asn Asn Phe Leu Tyr Leu Cys Gly Phe Gln
 115 120 125
 Glu Pro Asp Ser Ile Leu Val Leu Gln Ser Leu Pro Gly Lys Gln Leu
 130 135 140
 Pro Ser His Lys Ala Ile Leu Phe Val Pro Arg Arg Asp Pro Ser Arg
 145 150 155 160
 Glu Leu Trp Asp Gly Pro Arg Ser Gly Thr Asp Gly Ala Ile Ala Leu
 165 170 175
 Thr Gly Val Asp Glu Ala Tyr Thr Leu Glu Glu Phe Gln His Leu Leu
 180 185 190
 Pro Lys Met Lys Val Leu Leu Pro Ala Leu Gln Lys Glu Val Leu Phe
 195 200 205
 Ser Lys Asn Asp Pro Cys Ile Thr Ala Ser Glu Ser Pro Ala Glu Thr
 210 215 220
 Asn Met Val Trp Tyr Asp Trp Met Arg Pro Ser His Ala Gln Leu His
 225 230 235 240
 Ser Asp Tyr Met Gln Pro Leu Thr Glu Ala Lys Ala Lys Ser Lys Asn
 245 250 255
 Lys Val Arg Gly Val Gln Gln Leu Ile Gln Arg Leu Arg Leu Ile Lys
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 35 40 45
 Pro Ser Pro Phe Thr His Pro His Leu Leu Arg Pro Gly Glu Val Thr
 50 55 60
 Pro Gly Leu Ser Gln Val Glu Tyr Ala Leu Arg Arg His Lys Leu Met
 65 70 75 80
 Ser Leu Ile Gln Lys Glu Ala Gln Gly Gln Ser Gly Thr Asp Gln Thr
 85 90 95
 Val Val Val Leu Ser Asn Pro Thr Tyr Met Ser Asn Asp Ile Pro
 100 105 110
 Tyr Thr Phe His Gln Asp Asn Asn Phe Leu Tyr Leu Cys Gly Phe Gln
 115 120 125
 Glu Pro Asp Ser Ile Leu Val Leu Gln Ser Leu Pro Gly Lys Gln Leu
 130 135 140
 Pro Ser His Lys Ala Ile Leu Phe Val Pro Arg Arg Asp Pro Ser Arg
 145 150 155 160
 Glu Leu Trp Asp Gly Pro Arg Ser Gly Thr Asp Gly Ala Ile Ala Leu
 165 170 175
 Thr Gly Val Asp Glu Ala Tyr Thr Leu Glu Glu Phe Gln His Leu Leu
 180 185 190
 Pro Lys Met Lys Ala Glu Thr Asn Met Val Trp Tyr Asp Trp Met Arg
 195 200 205
 Pro Ser His Ala Gln Leu His Ser Asp Tyr Met Gln Pro Leu Thr Glu
 210 215 220
 Ala Lys Ala Lys Ser Lys Asn Lys Val Arg Gly Val Gln Gln Leu Ile
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 35 40 45
 Gln Glu Pro Asp Ser Ile Leu Val Leu Gln Ser Leu Pro Gly Lys Gln
 50 55 60
 Leu Pro Ser His Lys Ala Ile Leu Phe Val Pro Arg Arg Asp Pro Ser
 65 70 75 80
 Arg Glu Leu Trp Asp Gly Pro Arg Ser Gly Thr Asp Gly Ala Ile Ala
 85 90 95
 Leu Thr Gly Val Asp Glu Ala Tyr Thr Leu Glu Glu Phe Gln His Leu
 100 105 110
 Leu Pro Lys Met Lys Val Leu Leu Pro Ala Leu Gln Lys Glu Val Leu
 115 120 125
 Phe Ser Lys Asn Asp Pro Cys Ile Thr Ala Ser Glu Ser Pro Ala Glu
 130 135 140
 Thr Asn Met Val Trp Tyr Asp Trp Met Arg Pro Ser His Ala Gln Leu
 145 150 155 160
 His Ser Asp Tyr Met Gln Pro Leu Thr Glu Ala Lys Ala Lys Ser Lys
 165 170 175
 Asn Lys Val Arg Gly Val Gln Gln Leu Ile Gln Arg Leu Arg Leu Ile
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 Ser Gln Val
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 35 40 45
 Tyr Ala Leu Arg Arg His Lys Leu Met Ser Leu Ile Gln Lys Glu Ala
 50 55 60
 Gln Gly Gln Ser Gly Thr Asp Gln Thr Val Val Leu Ser Asn Pro
 65 70 75 80
 Thr Tyr Tyr Met Ser Asn Asp Ile Pro Tyr Thr Phe His Gln Asp Asn
 85 90 95
 Asn Phe Leu Tyr Leu Cys Gly Phe Gln Glu Pro Asp Ser Ile Leu Val
 100 105 110
 Leu Gln Ser Leu Pro Gly Lys Gln Leu Pro Ser His Lys Ala Ile Leu
 115 120 125
 Phe Val Pro Arg Arg Asp Pro Ser Arg Glu Leu Trp Asp Gly Pro Arg
 130 135 140
 Ser Gly Thr Asp Gly Ala Ile Ala Leu Thr Gly Val Asp Glu Ala Tyr
 145 150 155 160
 Thr Leu Glu Glu Phe Gln His Leu Leu Pro Lys Met Lys Val Leu Leu
 165 170 175
 Pro Ala Leu Gln Lys Glu Val Leu Phe Ser Lys Asn Asp Pro Cys Ile
 180 185 190
 Thr Ala Ser Glu Ser Pro Ala Glu Thr Asn Met Val Trp Tyr Asp Trp
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<212> DNA

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          35           40           45
Tyr Ala Leu Arg Arg His Lys Leu Met Ser Leu Ile Gln Lys Glu Ala
          50           55           60
Gln Gly Gln Ser Gly Thr Asp Gln Thr Val Val Val Leu Ser Asn Pro
65           70           75           80
Thr Tyr Tyr Met Ser Asn Asp Ile Pro Tyr Thr Phe His Gln Asp Asn
          85           90           95
Asn Phe Leu Tyr Leu Cys Gly Phe Gln Glu Pro Asp Ser Ile Leu Val
          -100           - 105           110
Leu Gln Ser Leu Pro Gly Lys Gln Leu Pro Ser His Lys Ala Ile Leu
          115           120           125
Phe Val Pro Arg Arg Asp Pro Ser Arg Glu Leu Trp Asp Gly Pro Arg
          130           135           140
Ser Gly Thr Asp Gly Ala Ile Ala Leu Thr Gly Val Asp Glu Ala Tyr
145           150           155           160
Thr Leu Glu Glu Phe Gln His Leu Leu Pro Lys Met Lys Ala Glu Thr
          165           170           175
Asn Met Val Trp Tyr Asp Trp Met Arg Pro Ser His Ala Gln Leu His
          180           185           190
Ser Asp Tyr Met Gln Pro Leu Thr Glu Ala Lys Ala Lys Ser Lys Asn
          195           200           205
Lys Val Arg Gly Val Gln Gln Leu Ile Gln Arg Leu Arg Leu Ile Lys
          210           215           220
Ser Pro Ala Glu Ile Glu Arg Met Gln Ile Ala Gly Lys Leu Thr Ser
225           230           235           240
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 35 40 45
 Gln Glu Pro Asp Ser Ile Leu Val Leu Gln Ser Leu Pro Gly Lys Gln
 50 55 60
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 65 70 75 80
 Arg Glu Leu Trp Asp Gly Pro Arg Ser Gly Thr Asp Gly Ala Ile Ala
 85 90 95
 Leu Thr Gly Val Asp Glu Ala Tyr Thr Leu Glu Glu Phe Gln His Leu
 100 105 110
 Leu Pro Lys Met Lys Val Leu Leu Pro Ala Leu Gln Lys Glu Val Leu
 115 120 125
 Phe Ser Lys Asn Asp Pro Cys Ile Thr Ala Ser Glu Ser Pro Ala Glu
 130 135 140
 Thr Asn Met Val Trp Tyr Asp Trp Met Arg Pro Ser His Ala Gln Leu
 145 150 155 160

His Ser Asp Tyr Met Gln Pro Leu Thr Glu Ala Lys Ala Lys Ser Lys
 165 170 175
 Asn Lys Val Arg Gly Val Gln Gln Leu Ile Gln Arg Leu Arg Leu Ile
 180 185 190
 Lys Ser Pro Ala Glu Ile Glu Arg Met Gln Ile Ala Gly Lys Leu Thr
 195 200 205
 Ser Gln Ala Phe Ile Glu Thr Met Phe Thr Ser Lys Ala Pro Val Glu
 210 215 220
 Glu Ala Phe Leu Tyr Ala Lys Phe Glu Phe Glu Cys Arg Ala Arg Gly
 225 230 235 240
 Ala Asp Ile Leu Ala Tyr Pro Pro Val Val Ala Gly Gly Asn Arg Ser
 245 250 255
 Asn Thr Leu His Tyr Val Lys Asn Asn Gln Leu Ile Lys Asp Gly Glu
 260 265 270
 Met Val Leu Leu Asp Gly Gly Cys Glu Ser Ser Cys Tyr Val Ser Asp
 275 280 285
 Ile Thr Arg Thr Trp Pro Val Asn Gly Arg Phe Thr Ala Pro Gln Ala
 290 295 300
 Glu Leu Tyr Glu Ala Val Leu Glu Ile Gln Arg Asp Cys Leu Ala Leu
 305 310 315 320
 Cys Phe Pro Gly Thr Ser Leu Glu Asn Ile Tyr Ser Met Met Leu Thr
 325 330 335
 Leu Ile Gly Gln Lys Leu Lys Asp Leu Gly Ile Met Lys Asn Ile Lys
 340 345 350
 Glu Asn Asn Ala Phe Lys Ala Ala Arg Lys Tyr Cys Pro His His Val
 355 360 365
 Gly His Tyr Leu Gly Met Asp Val His Asp Thr Pro Asp Met Pro Arg
 370 375 380
 Ser Leu Pro Leu Gln Pro Gly Met Val Ile Thr Ile Glu Pro Gly Ile
 385 390 395 400
 Tyr Ile Pro Glu Asp Asp Lys Asp Ala Pro Glu Lys Phe Arg Gly Leu
 405 410 415
 Gly Val Arg Ile Glu Asp Asp Val Val Val Thr Gln Asp Ser Pro Leu
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<212> PRT

<213> homo sapiens

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Leu	Gln	Pro	Val	Pro	Glu	Arg	Arg	Ile	Pro	Asn	Arg	Tyr	Leu	Gly	Gln
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Pro	Ser	Pro	Phe	Thr	His	Pro	His	Leu	Leu	Arg	Pro	Gly	Glu	Val	Thr
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Pro	Gly	Leu	Ser	Gln	Val	Glu	Tyr	Ala	Leu	Arg	His	Lys	Leu	Met	
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Ser	Leu	Ile	Gln	Lys	Glu	Ala	Gln	Gly	Gln	Ser	Gly	Thr	Asp	Gln	Thr
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Val	Val	Val	Leu	Ser	Asn	Pro	Thr	Tyr	Tyr	Met	Ser	Asn	Asp	Ile	Pro
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Tyr	Thr	Phe	His	Gln	Asp	Asn	Asn	Phe	Leu	Tyr	Leu	Cys	Gly	Phe	Gln
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Glu	Pro	Asp	Ser	Ile	Leu	Val	Leu	Gln	Ser	Leu	Pro	Gly	Lys	Gln	Leu
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Pro	Lys	Met	Lys	Val	Leu	Leu	Pro	Ala	Leu	Gln	Lys	Glu	Val	Leu	Phe
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Ser	Lys	Asn	Asp	Pro	Cys	Ile	Thr	Ala	Ser	Glu	Ser	Pro	Ala	Glu	Thr
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Gln Ala Phe Ile Glu Thr Met Phe Thr Ser Lys Ala Pro Val Glu Glu		
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Ala Phe Leu Tyr Ala Lys Phe Glu Phe Glu Cys Arg Ala Arg Gly Ala		
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Asp Ile Leu Ala Tyr Pro Pro Val Val Ala Gly Gly Asn Arg Ser Asn		
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Thr Leu His Tyr Val Lys Asn Asn Gln Leu Ile Lys Asp Gly Glu Met		
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Val Leu Leu Asp Gly Gly Cys Glu Ser Ser Cys Tyr Val Ser Asp Ile		
355	360	365
Thr Arg Thr Trp Pro Val Asn Gly Arg Phe Thr Ala Pro Gln Ala Glu		
370	375	380
Leu Tyr Glu Ala Val Leu Glu Ile Gln Arg Asp Cys Leu Ala Leu Cys		
385	390	400
Phe Pro Gly Thr Ser Leu Glu Asn Ile Tyr Ser Met Met Leu Thr Leu		
405	410	415
Ile Gly Gln Lys Leu Lys Asp Leu Gly Ile Met Lys Asn Ile Lys Glu		
420	425	430
Asn Asn Ala Phe Lys Ala Ala Arg Lys Tyr Cys Pro His His Val Gly		
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His Tyr Leu Gly Met Asp Val His Asp Thr Pro Asp Met Pro Arg Ser		
450	455	460
Leu Pro Leu Gln Pro Gly Met Val Ile Thr Ile Glu Pro Gly Ile Tyr		
465	470	475
Ile Pro Glu Asp Asp Lys Asp Ala Pro Glu Lys Phe Arg Gly Leu Gly		
485	490	495
Val Arg Ile Glu Asp Asp Val Val Val Thr Gln Asp Ser Pro Leu Ile		
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Ser Gln Ala Ser		
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 <212> DNA
 <213> homo sapiens

<400> 21

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Pro	Tyr	Thr	Phe	His	Gln	Asp	Asn	Asn	Phe	Leu	Tyr	Leu	Cys	Gly	Phe	
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Gln	Glu	Pro	Asp	Ser	Ile	Leu	Val	Leu	Gln	Ser	Leu	Pro	Gly	Lys	Gln	
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Leu	Pro	Ser	His	Lys	Ala	Ile	Leu	Phe	Val	Pro	Arg	Arg	Asp	Pro	Ser	
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Arg	Glu	Leu	Trp	Asp	Gly	Pro	Arg	Ser	Gly	Thr	Asp	Gly	Ala	Ile	Ala	
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Gln	Ile	Ala	Gly	Lys	Leu	Thr	Ser	Gln	Ala	Phe	Ile	Glu	Thr	Met	Phe	
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Ile	Tyr	Ser	Met	Met	Leu	Thr	Leu	Ile	Gly	Gln	Lys	Leu	Lys	Asp	Leu	
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 340 345 350
 Asp Thr Pro Asp Met Pro Arg Ser Leu Pro Leu Gln Pro Gly Met Val
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 Ile Thr Ile Glu Pro Gly Ile Tyr Ile Pro Glu Asp Asp Lys Asp Ala
 370 375 380
 Pro Glu Lys Phe Arg Gly Leu Gly Val Arg Ile Glu Asp Asp Val Val
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<211> 1455
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<211> 484
<212> PRT
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35 40 45
Tyr Ala Leu Arg Arg His Lys Leu Met Ser Leu Ile Gln Lys Glu Ala
50 55 60
Gln Gly Gln Ser Gly Thr Asp Gln Thr Val Val Leu Ser Asn Pro
65 70 75 80
Thr Tyr Tyr Met Ser Asn Asp Ile Pro Tyr Thr Phe His Gln Asp Asn
85 90 95

Asn Phe Leu Tyr Leu Cys Gly Phe Gln Glu Pro Asp Ser Ile Leu Val
 100 105 110
 Leu Gln Ser Leu Pro Gly Lys Gln Leu Pro Ser His Lys Ala Ile Leu
 115 120 125
 Phe Val Pro Arg Arg Asp Pro Ser Arg Glu Leu Trp Asp Gly Pro Arg
 130 135 140
 Ser Gly Thr Asp Gly Ala Ile Ala Leu Thr Gly Val Asp Glu Ala Tyr
 145 150 155 160
 Thr Leu Glu Glu Phe Gln His Leu Leu Pro Lys Met Lys Ala Glu Thr
 165 170 175
 Asn Met Val Trp Tyr Asp Trp Met Arg Pro Ser His Ala Gln Leu His
 180 185 190
 Ser Asp Tyr Met Gln Pro Leu Thr Glu Ala Lys Ala Lys Ser Lys Asn
 195 200 205
 Lys Val Arg Gly Val Gln Gln Leu Ile Gln Arg Leu Arg Leu Ile Lys
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 Ser Pro Ala Glu Ile Glu Arg Met Gln Ile Ala Gly Lys Leu Thr Ser
 225 230 235 240
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 245 250 255
 Ala Phe Leu Tyr Ala Lys Phe Glu Phe Glu Cys Arg Ala Arg Gly Ala
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 Asp Ile Leu Ala Tyr Pro Pro Val Val Ala Gly Gly Asn Arg Ser Asn
 275 280 285
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 Val Leu Leu Asp Gly Gly Cys Glu Ser Ser Cys Tyr Val Ser Asp Ile
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 Phe Pro Gly Thr Ser Leu Glu Asn Ile Tyr Ser Met Met Leu Thr Leu
 355 360 365
 Ile Gly Gln Lys Leu Lys Asp Leu Gly Ile Met Lys Asn Ile Lys Glu
 370 375 380
 Asn Asn Ala Phe Lys Ala Ala Arg Lys Tyr Cys Pro His His Val Gly
 385 390 395 400
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<211> 3208

<212> DNA

<213> homo sapiens

<400> 27

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